

What is claimed is:

1. A receiver, comprising:

a filter which outputs an input signal containing a plurality of channels by rejecting an image band in a frequency converting process;

a frequency converter having an analog orthogonal demodulator, which converts the frequency of said plurality of channels into the low range in batch when the input signal whose image band has been rejected by said filter is inputted;

an image rejecting device which rejects and outputs said image band of the signal of said plurality of channels whose frequency has been converted by said frequency converter;

an A/D converter which converts the signal of said plurality of channels which is the output of said image rejecting device into a digital signal; and

a channel selector which selects a desirable channel out of the signals of said plurality of channels contained in the output of said A/D converter by digital processing.

2. A receiver, comprising:

a filter which outputs an input signal containing a plurality of channels by rejecting an image band in a frequency converting process;

a frequency converter having an analog orthogonal demodulator, which converts the frequency of said plurality

of channels into the low range in batch when the input signal whose image band has been rejected by said filter is inputted;

an A/D converter which converts the signals of said plurality of channels whose frequency have been converted by said frequency converter into a digital signal;

a channel selector which selects a desirable channel out of the signals of said plurality of channels contained in the output of said A/D converter by digital processing; and

an image rejecting device which rejects said image band before, during or after said digital processing of said channel selector.

3. The receiver according to Claim 1 or 2, wherein said frequency converter comprises a local oscillator which outputs a local oscillating output of the frequency on the outside of a scope of bands of said plurality of channels and an analog orthogonal demodulator which converts the input signals of said plurality of channels to the low range in batch by multiplication of said local oscillating output and said input signal.

4. The receiver according to Claim 1, wherein said channel selector comprises:

a variable local oscillator in which oscillating frequency for outputting the local oscillating output of the frequency of said desirable channel is variable;

a digital orthogonal demodulator which demodulates said desirable channel by multiplication of the local oscillating output of said variable local oscillator and the signals of said plurality of channels in digital which have been converted into the low range; and

a digital filter which selects the desirable channel out of the output of said digital orthogonal demodulator.

5. The receiver according to Claim 2, wherein said channel selector comprises:

a variable local oscillator in which oscillating frequency for outputting the local oscillating output of the frequency of said desirable channel is variable;

a digital orthogonal demodulator which demodulates said desirable channel by multiplication of the local oscillating output of said variable local oscillator and the signals of said plurality of channels in digital which have been converted into the low range; and

a digital filter which selects the desirable channel out of the output of said digital orthogonal demodulator.

6. The receiver according to Claim 5, wherein said image rejecting device obtains the output in which said image band has been rejected from the output of said A/D converter, the output of said digital orthogonal demodulator or the output of said digital filter.

7. The receiver according to Claim 1 or 2, wherein said frequency converter divides the input signals containing said plurality of channels into a plurality of sub-bands and converts the frequency of the output of said filter into the low range in batch per said sub-band.

8. The receiver according to Claim 1 or 2, wherein said frequency converter comprises:

a local oscillator which divides the band of said plurality of channels into a plurality of sub-bands and outputs a local oscillating output whose frequency has been changed at intervals of the band width or more of said sub-band; and

an analog orthogonal demodulator which converts the frequency of the input signals of said plurality of channels into the low range in batch per each sub-band by multiplication of said local oscillating output and said input signals.

9. The receiver according to Claim 1 or 2, wherein said frequency converter comprises:

a local oscillator which divides the band of said plurality of channels into a plurality of sub-bands and outputs a local oscillating output whose frequency is on the outside of the scope of the band of each sub-band and whose frequency has been changed at intervals of the band width or more of said sub-band; and

an analog orthogonal demodulator which converts the frequency of the input signals of said plurality of channels into the low range in batch per each sub-band by multiplication of said local oscillating output and said input signals.

10. A receiver, comprising:

filtering means for outputting an input signal containing a plurality of channels by rejecting an image band in a frequency converting process;

frequency converting means having an analog orthogonal demodulator and converting the frequency of said plurality of channels into the low range in batch when the input signal whose image band has been rejected by said filtering means is inputted;

image rejecting means for rejecting and outputting said image band of the signal of said plurality of channels whose frequency has been converted by said frequency converting means;

A/D converting means for converting the signal of said plurality of channels which is the output of said image rejecting means into a digital signal; and

channel selecting means for selecting a desirable channel out of the signals of said plurality of channels contained in the output said A/D converting means by digital processing.

11. A receiver, comprising:

filtering means for outputting an input signal containing a plurality of channels by rejecting an image band in a frequency converting process;

frequency converting means having an analog orthogonal demodulating means and converting the frequency of said plurality of channels into the low range in batch when the input signal whose image band has been rejected by said filtering means is inputted;

A/D converting means for converting the signals of said plurality of channels whose frequency have been converted by said frequency converting means into a digital signal;

channel selecting means for selecting a desirable channel out of the signals of said plurality of channels contained in the output of said A/D converting means by digital processing; and

image rejecting means for rejecting said image band before, during or after said digital processing of said channel selecting means.